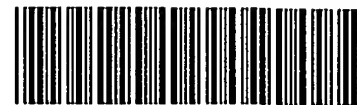


RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/568,259
Source: IFWP
Date Processed by STIC: 2/23/06

ENTERED



IFWP

RAW SEQUENCE LISTING

DATE: 02/23/2006

PATENT APPLICATION: US/10/568,259

TIME: 08:00:42

Input Set : A:\211010041U2.TXT

Output Set: N:\CRF4\02232006\J568259.raw

```

4 <110> APPLICANT: Glenn D. Prestwich
5      Shenshen Cal
6      Jodi Beattie
7      Michael J. Mostert
10 <120> TITLE OF INVENTION: HEPARIN BINDING PROTEINS: SENSORS FOR
11     HEPARIN DETECTION
13 <130> FILE REFERENCE: 21101.0041U2
C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/568,259
C--> 15 <141> CURRENT FILING DATE: 2006-02-13
15 <150> PRIOR APPLICATION NUMBER: PCT/US04/26066
16 <151> PRIOR FILING DATE: 2004-08-12
18 <150> PRIOR APPLICATION NUMBER: 60/494,495
19 <151> PRIOR FILING DATE: 2003-08-12
21 <160> NUMBER OF SEQ ID NOS: 67
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 9
27 <212> TYPE: PRT
28 <213> ORGANISM: Artificial Sequence
30 <220> FEATURE:
31 <223> OTHER INFORMATION: Description of Artificial Sequence; note =
32     synthetic construct
34 <220> FEATURE:
35 <221> NAME/KEY: VARIANT
36 <222> LOCATION: 1,9
37 <223> OTHER INFORMATION: Xaa can be Arg or Lys
39 <220> FEATURE:
40 <221> NAME/KEY: VARIANT
41 <222> LOCATION: 2-8
42 <223> OTHER INFORMATION: Xaa = basic residues
44 <400> SEQUENCE: 1
W--> 45 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
46 1      5
48 <210> SEQ ID NO: 2
49 <211> LENGTH: 43
50 <212> TYPE: DNA
51 <213> ORGANISM: Artificial Sequence
53 <220> FEATURE:
54 <223> OTHER INFORMATION: Description of Artificial Sequence; note =
55     synthetic construct
57 <400> SEQUENCE: 2
58 cgggatccgg tgctagccgt gactcctatg cacagctcct tgg
60 <210> SEQ ID NO: 3

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43

RAW SEQUENCE LISTING

DATE: 02/23/2006

PATENT APPLICATION: US/10/568,259

TIME: 08:00:42

Input Set : A:\211010041U2.TXT

Output Set: N:\CRF4\02232006\J568259.raw

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61 <211> LENGTH: 39
62 <212> TYPE: DNA
63 <213> ORGANISM: Artificial Sequence
65 <220> FEATURE:
66 <223> OTHER INFORMATION: Description of Artificial Sequence; note =
67     synthetic construct
69 <400> SEQUENCE: 3
70 ggagcggtcg acacggatgc ccagagcttt atctaattc          39
72 <210> SEQ ID NO: 4
73 <211> LENGTH: 72
74 <212> TYPE: DNA
75 <213> ORGANISM: Artificial Sequence
77 <220> FEATURE:
78 <223> OTHER INFORMATION: Description of Artificial Sequence; note =
79     synthetic construct
81 <400> SEQUENCE: 4
82 gatccggtct cgaggaagt ggttctggaa gtggttcagg ttcgggtagc ggatctggtt      60
83 caggaagtgg tt                                          72
85 <210> SEQ ID NO: 5
86 <211> LENGTH: 72
87 <212> TYPE: DNA
88 <213> ORGANISM: Artificial Sequence
90 <220> FEATURE:
91 <223> OTHER INFORMATION: Description of Artificial Sequence; note =
92     synthetic construct
94 <400> SEQUENCE: 5
95 ctagaaccac ttcctgaacc agatccgcta cccgaacctg aaccacttcc agaaccactt      60
96 ccctcgagac cg                                          72
98 <210> SEQ ID NO: 6
99 <211> LENGTH: 62
100 <212> TYPE: PRT
101 <213> ORGANISM: Artificial Sequence
103 <220> FEATURE:
104 <223> OTHER INFORMATION: Description of Artificial Sequence; note =
105     synthetic construct
107 <400> SEQUENCE: 6
108 Arg Asp Ser Tyr Ala Gln Leu Leu Gly His Gln Asn Leu Lys Gln Lys
109 1          5          10          15
110 Ile Lys His Val Val Lys Leu Lys Asp Glu Asn Ser Gln Leu Lys Ser
111          20          25          30
112 Glu Val Ser Lys Leu Arg Ser Gln Leu Val Lys Arg Lys Gln Asn Glu
113          35          40          45
114 Leu Arg Leu Gln Gly Glu Leu Asp Lys Ala Leu Gly Ile Arg
115          50          55          60
117 <210> SEQ ID NO: 7
118 <211> LENGTH: 794
119 <212> TYPE: PRT
120 <213> ORGANISM: Artificial Sequence
122 <220> FEATURE:

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RAW SEQUENCE LISTING

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PATENT APPLICATION: US/10/568,259

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Input Set : A:\211010041U2.TXT

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123 <223> OTHER INFORMATION: Description of Artificial Sequence; note =
124     synthetic construct
126 <400> SEQUENCE: 7
127 Met Ser Phe Pro Lys Ala Pro Leu Lys Arg Phe Asn Asp Pro Ser Gly
128 1      5      10      15
129 Cys Ala Pro Ser Pro Gly Ala Tyr Asp Val Lys Thr Ser Glu Ala Thr
130      20      25      30
131 Lys Gly Pro Val Ser Phe Gln Lys Ser Gln Arg Phe Lys Asn Gln Arg
132      35      40      45
133 Glu Ser Gln Gln Asn Leu Ser Ile Asp Lys Asp Thr Thr Leu Leu Ala
134      50      55      60
135 Ser Ala Lys Lys Ala Lys Lys Ser Val Ser Lys Lys Asp Ser Gln Lys
136 65      70      75      80
137 Asn Asp Lys Asp Val Lys Arg Leu Glu Lys Glu Ile Arg Ala Leu Leu
138      85      90      95
139 Gln Glu Arg Gly Thr Gln Asp Lys Arg Ile Gln Asp Met Glu Ser Glu
140      100     105     110
141 Leu Glu Lys Thr Glu Ala Lys Leu Asn Ala Ala Val Arg Glu Lys Thr
142      115     120     125
143 Ser Leu Ser Ala Ser Asn Ala Ser Leu Glu Lys Arg Leu Thr Glu Leu
144      130     135     140
145 Thr Arg Ala Asn Glu Leu Leu Lys Ala Lys Phe Ser Glu Asp Gly His
146 145     150     155     160
147 Gln Lys Asn Met Arg Ala Leu Ser Leu Glu Leu Met Lys Leu Arg Asn
148      165     170     175
149 Lys Arg Glu Thr Lys Met Arg Ser Met Met Val Lys Gln Glu Gly Met
150      180     185     190
151 Glu Leu Lys Leu Gln Ala Thr Gln Lys Asp Leu Thr Glu Ser Lys Gly
152      195     200     205
153 Lys Ile Val Gln Leu Glu Gly Lys Leu Val Ser Ile Glu Lys Glu Lys
154      210     215     220
155 Ile Asp Glu Lys Cys Glu Thr Glu Lys Leu Leu Glu Tyr Ile Gln Glu
156 225     230     235     240
157 Ile Ser Cys Ala Ser Asp Gln Val Glu Lys Cys Lys Val Asp Ile Ala
158      245     250     255
159 Gln Leu Glu Glu Asp Leu Lys Glu Lys Asp Arg Glu Ile Leu Ser Leu
160      260     265     270
161 Lys Gln Ser Leu Glu Glu Asn Ile Thr Phe Ser Lys Gln Ile Glu Asp
162      275     280     285
163 Leu Thr Val Lys Cys Gln Leu Leu Glu Thr Glu Arg Asp Asn Leu Val
164      290     295     300
165 Ser Lys Asp Arg Glu Arg Ala Glu Thr Leu Ser Ala Glu Met Gln Ile
166 305     310     315     320
167 Leu Thr Glu Arg Leu Ala Leu Glu Arg Gln Glu Tyr Glu Lys Leu Gln
168      325     330     335
169 Gln Lys Glu Leu Gln Ser Gln Ser Leu Leu Gln Gln Glu Lys Glu Leu
170      340     345     350
171 Ser Ala Arg Leu Gln Gln Gln Leu Cys Ser Phe Gln Glu Glu Met Thr
172      355     360     365

```

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```

173 Ser Glu Lys Asn Val Phe Lys Glu Glu Leu Lys Leu Ala Leu Ala Glu
174      370      375      380
175 Leu Asp Ala Val Gln Gln Lys Glu Glu Gln Ser Glu Arg Leu Val Lys
176 385      390      395      400
177 Gln Leu Glu Glu Glu Arg Lys Ser Thr Ala Glu Gln Leu Thr Arg Leu
178      405      410      415
179 Asp Asn Leu Leu Arg Glu Lys Glu Val Glu Leu Glu Lys His Ile Ala
180      420      425      430
181 Ala His Ala Gln Ala Ile Leu Ile Ala Gln Glu Lys Tyr Asn Asp Thr
182      435      440      445
183 Ala Gln Ser Leu Arg Asp Val Thr Ala Gln Leu Glu Ser Val Gln Glu
184      450      455      460
185 Lys Tyr Asn Asp Thr Ala Gln Ser Leu Arg Asp Val Thr Ala Gln Leu
186 465      470      475      480
187 Glu Ser Glu Gln Glu Lys Tyr Asn Asp Thr Ala Gln Ser Leu Arg Asp
188      485      490      495
189 Val Thr Ala Gln Leu Glu Ser Glu Gln Glu Lys Tyr Asn Asp Thr Ala
190      500      505      510
191 Gln Ser Leu Arg Asp Val Thr Ala Gln Leu Glu Ser Val Gln Glu Lys
192      515      520      525
193 Tyr Asn Asp Thr Ala Gln Ser Leu Arg Asp Val Ser Ala Gln Leu Glu
194      530      535      540
195 Ser Tyr Lys Ser Ser Thr Leu Lys Glu Ile Glu Asp Leu Lys Leu Glu
196 545      550      555      560
197 Asn Leu Thr Leu Gln Glu Lys Val Ala Met Ala Glu Lys Ser Val Glu
198      565      570      575
199 Asp Val Gln Gln Gln Ile Leu Thr Ala Glu Ser Thr Asn Gln Glu Tyr
200      580      585      590
201 Ala Arg Met Val Gln Asp Leu Gln Asn Arg Ser Thr Leu Lys Glu Glu
202      595      600      605
203 Glu Ile Lys Glu Ile Thr Ser Ser Phe Leu Glu Lys Ile Thr Asp Leu
204      610      615      620
205 Lys Asn Gln Leu Arg Gln Gln Asp Glu Asp Phe Arg Lys Gln Leu Glu
206 625      630      635      640
207 Glu Lys Gly Lys Arg Thr Ala Glu Lys Glu Asn Val Met Thr Glu Leu
208      645      650      655
209 Thr Met Glu Ile Asn Lys Trp Arg Leu Leu Tyr Glu Glu Leu Tyr Glu
210      660      665      670
211 Lys Thr Lys Pro Phe Gln Gln Gln Leu Asp Ala Phe Glu Ala Glu Lys
212      675      680      685
213 Gln Ala Leu Leu Asn Glu His Gly Ala Thr Gln Glu Gln Leu Asn Lys
214      690      695      700
215 Ile Arg Asp Ser Tyr Ala Gln Leu Leu Gly His Gln Asn Leu Lys Gln
216 705      710      715      720
217 Lys Ile Lys His Val Val Lys Leu Lys Asp Glu Asn Ser Gln Leu Lys
218      725      730      735
219 Ser Glu Val Ser Lys Leu Arg Ser Gln Leu Val Lys Arg Lys Gln Asn
220      740      745      750
221 Glu Leu Arg Leu Gln Gly Glu Leu Asp Lys Ala Leu Gly Ile Arg His

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Input Set : A:\211010041U2.TXT

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```

222          755          760          765
223 Phe Asp Pro Ser Lys Ala Phe Cys His Ala Ser Lys Glu Asn Phe Thr
224          770          775          780
225 Pro Leu Lys Glu Gly Asn Pro Asn Cys Cys
226 785          790
228 <210> SEQ ID NO: 8
229 <211> LENGTH: 3539
230 <212> TYPE: DNA
231 <213> ORGANISM: Artificial Sequence
233 <220> FEATURE:
234 <223> OTHER INFORMATION: Description of Artificial Sequence; note =
235     synthetic construct
237 <400> SEQUENCE: 8
238 tcaggcgagc tgacagtttg ctggggcggt tgattgctgt ctcatctgga cccaggcgctc      60
239 agaatgtcct ttcctaaggc gcccctgaag agattcaatg acccttcggg ttgtgctcca      120
240 tctccgggtg cttatgatgt taaaacttca gaagcaacta aaggaccagt gtcttttcag      180
241 aaatcacaaa gatttaaaaa ccaaagagag tctcaacaaa atcttagcat tgacaaagat      240
242 acaaccttgc ttgcttcggc taaaaaagca aagaagtctg tgtcaaagaa ggactctcag      300
243 aagaatgata aagatgtgaa gagattagaa aaagagattc gcgctctttt gcaagagcga      360
244 gggactcagg acaaacggat ccaggacatg gaatctgaat tggagaagac agaagcaaag      420
245 ctcaatgcag cagtcagaga gaaaacatct ctctctgcga gtaatgcttc actggaaaaa      480
246 cggcttactg aattaaccag agccaacgag ctactaaagg ctaagttttc tgaagatggg      540
247 caccaaaaga atatgagagc tctaagcctg gaattgatga aactcagaaa taagagagag      600
248 acaaagatga ggagtatgat ggtcaaacag gaaggcatgg agctgaagct gcaggccact      660
249 cagaaggacc tcacggagtc taagggaaaa atagtccagc tggagggaaa gcttgtttca      720
250 atagagaaaag aaaagatcga tgaaaaatgt gaaacagaaa aactcttaga atacatccaa      780
251 gaaattagct gtgcatctga tcaagtggaa aaatgcaaag tagatattgc ccagttagaa      840
252 gaagatttga aagagaagga tcgtgagatt ttaagtctta agcagtctct tgaggaaaac      900
253 attacatttt ctaagcaaat agaagacctg actgttaaat gccagctact tgaaacagaa      960
254 agagacaaac ttgtcagcaa ggatagagaa agggctgaaa ctctcagtcg tgagatgcag      1020
255 atcctgacag agaggctggc tctggaaagg caagaatatg aaaagctgca acaaaaagaa      1080
256 ttgcaaagcc agtcacttct gcagcaagag aaggaactgt ctgctcgtct gcagcagcag      1140
257 ctctgctctt tccaagagga aatgacttct gagaagaacg tctttaaaga agagctaaag      1200
258 ctgcgcctgg ctgagttgga tgcggtccag cagaaggagg agcagagtga aaggctgggt      1260
259 aaacagctgg aagaggaaag gaagtcaact gcagaacaac tgacgcggct ggacaacctg      1320
260 ctgagagaga aagaagttga actggagaaa catattgctg ctacgcca agccatcttg      1380
261 attgcacaag agaagtataa tgacacagca cagagtctga gggacgtcac tgctcagttg      1440
262 gaaagtgtgc aagagaagta taatgacaca gcacagagtc tgagggacgt cactgctcag      1500
263 ttggaaagtg agcaagagaa gtacaatgac acagcacaga gtctgagggg cgctactgct      1560
264 cagttggaaa gtgagcaaga gaagtacaat gacacagcac agagtctgag ggacgtcact      1620
265 gctcagttgg aaagtgtgca agagaagtac aatgacacag cacagagtct gagggacgtc      1680
266 agtgctcagt tggaaagcta taagtcatca acacttaag aaatagaaga tcttaaaactg      1740
267 gagaatttga ctctacaaga aaaagtagct atggctgaaa aaagtgtaga agatgttcaa      1800
268 cagcagatat tgacagctga gagcacaat caagaatatg caaggatggg tcaagatttg      1860
269 cagaacagat caaccttaaa agaagaagaa attaaagaaa tcacatcttc atttcttgag      1920
270 aaaataactg atttgaaaaa tcaactcaga caacaagatg aagactttag gaagcagctg      1980
271 gaagagaag gaaaaagaac agcagagaaa gaaaatgtaa tgacagaatt aacctggaa      2040
272 attaataaat ggcgtctcct atatgaagaa ctatatgaaa aaactaaacc ttttcagcaa      2100
273 caactggatg cttttgaagc cgagaaacag gcattggtga atgaacatgg tgcaactcag      2160

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 02/23/2006
PATENT APPLICATION: US/10/568,259 TIME: 08:00:43

Input Set : A:\211010041U2.TXT
Output Set: N:\CRF4\02232006\J568259.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 1,2,3,4,5,6,7,8,9

VERIFICATION SUMMARY

DATE: 02/23/2006

PATENT APPLICATION: US/10/568,259

TIME: 08:00:43

Input Set : A:\211010041U2.TXT

Output Set: N:\CRF4\02232006\J568259.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application No

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:45 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0